

Work Order ID 84846

\*84846\*

Page 1

May-24-12 7:59:03 AM

Item ID: D3699-042  
Revision ID:  
Item Name: Support Assembly

Accept

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Start Date: 24/05/2012 Start Qty: 8.00  
Required Date: 07/06/2012 Req'd Qty: 8.00

\*8\*  
\*8\*

Cust Item ID:  
Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/05/20  
QC: Date:

Tooling:

Date:

SPC (Y/N):

Date: c

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3699	Rev A
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100	FLOW WATER JET	0.00
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\*100\*

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3699Dwg Rev: A Prog Rev: A

6061.050

\*\*\*grain direction along 9.00" \*\*\* 2- Deburr if necessary

8 0 JM 12-6-15

110	QC2- Inspect parts off machine FAI/FAIB	0.00
-----	---	------

\*110\*

QC

Memo

0.00

Quality Control

8 0 JM 12-6-15

120	QC8- Inspect parts - second check	0.00
-----	-----------------------------------	------

\*120\*

QC

Memo

0.00

Quality Control

5.2/06/15

8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 84846

May-24-12 7:59:03 AM

**\*84846\***

Page 2

Item ID: D3699-042

Accept

**\*N9000040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Support Assembly

Stop **\*NS2\***

Start Date: 24/05/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 07/06/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
<b>*130*</b>	NC BRAKE								
Brake NC	Memo	0.00				7	(X)		SS 12/06/15
Brake NC	Bend as per Dwg D3697								
140		0.00							
<b>*140*</b>	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.00				(X)			
Quality Control									
150		0.00							
<b>*150*</b>	Small Fab								
Small Fab	Memo	0.00				7X			EP 12/06/19
Small Fab	1- counter sink holes as per dwg D3699								

W/O: 84846		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3694-42 PAR #: \_\_\_\_\_ Fault Category: Small FAB NCR: Yes No DQA: OK Date: 12/6/04  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed Date: 12/7/5

NCR: 12-1556		WORK ORDER NON-CONFORMANCE (NCR) \$ 21.94						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/6/15	130	1 part is scrap at the set up out of tolerance R.C process	S 057042 12/06/15	Scrap = destroy No replace	S 12/06/15	S 12/06/15	S 057042 12/06/15	S 12/06/15

NOTE: Date & initial all entries

# Work Order ID 84846

**\*84846\***

Page 3

May-24-12 7:59:03 AM

Item ID: D3699-042

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Support Assembly

Start Date: 24/05/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 07/06/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC5- Inspect part completeness to step on W/O

0.00

**\*160\***

QC

Memo

0.00

Quality Control

170

Chemical Conversion Coat per QSI005 4.1

0.00

**\*170\***

HandFinish

Memo

0.00

Hand Finishing

180

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00

**\*180\***

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

3200F

4:20

M121279

7

7 3/6 12.6.19

7X

MT 12/06/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 84846

**\*84846\***

Page 4

May-24-12 7:59:03 AM

Item ID: D3699-042

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Support Assembly

Start Date: 24/05/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 07/06/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC3- Inspect Part Finish	0.00							
<b>*190*</b>									
QC	Memo	0.00				7	0	12-6-20	
Quality Control									
200	Pick Kit	0.00							
<b>*200*</b>									
Packaging	Memo	0.00				7x			12/06/12
Packaging									
210	Small Fab	0.00							
<b>*210*</b>									
Small Fab	Memo	0.00				7x			12/06/12
Small Fab	Assemble as per dwg D3699								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-24-12 7:59:06 AM

Page 1

Work Order ID: 84846

\*84846\*

Parent Item: D3699-042

\*D3699-042\*

Parent Item Name: Support Assembly

Start Date: 24/05/2012

Required Date: 07/06/2012

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP Rev:A 08-04-25 new issue DD verified by:ec  
IPP Rev:B 08-07-14 revA as per dwg DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MS20426AD3-3 Purchased No

\*MS20426AD3-3\*  
Rivet

100 Each 3,415.000 2 16

\*\*

Location

Loc Qty

Loc Code

ST316

3415

119109

569

121011

2429

19099

417

M6061T6S.050 Purchased No

\*M6061T6S 050\*  
6061-T6 .050 Sheet

210 sf 194.6640 0.4569

\*\*

3.847579

Location

Loc Qty

Loc Code

021

118.5

1211920

118.5

MAT021

76.164

114799

61.164

114993

15

114799

Jun 12-6-15

JP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-24-12 7:59:06 AM

Page 2

Work Order ID: 84846

**\*84846\***

Parent Item: D3699-042

**\*D3699-042\***

Parent Item Name: Support Assembly

Start Date: 24/05/2012

Required Date: 07/06/2012

Start Qty: 8.00

Required Qty: 8.00

MS21059L3

Purchased

No

210

Each

324.0000

1

8

**\*MS21059L3\***

Nut Plate

\*\*

*Handwritten signature and date: 05/06/2012*

Location

Loc Qty

Loc Code

302	82	
121185	82	
ST301	28	
118614	8	
119546	20	
ST302	214	
120308	13	
120833	1	
121444	100	
121524	100	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	84846
<b>Description:</b> Support, RH		<b>Part Number:</b>	D3699-2
<b>Inspection Dwg:</b> D3699 <b>Rev:</b> A		<b>Page 1 of 1</b>	

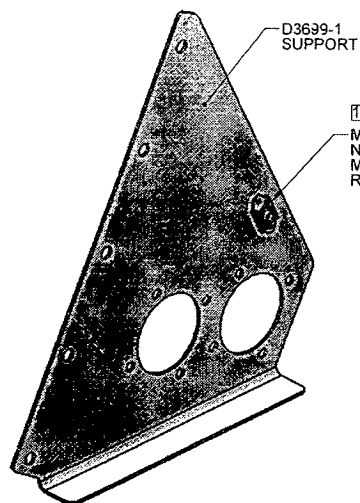
### FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
                 
 ☐ **Prototype**

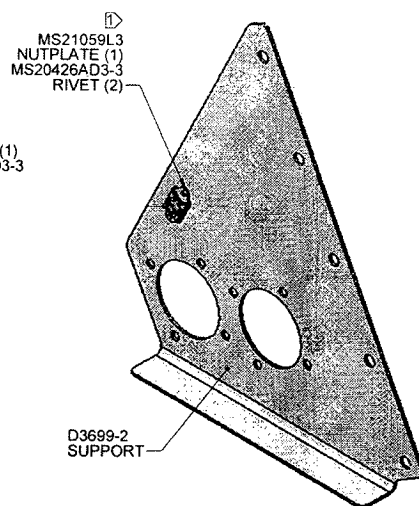
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	0.098"	✓		✓	mmor
Ø0.180	+0.005/-0.001	0.180"	-		✓	"
Ø0.238	+0.005/-0.001	0.238"	-		✓	"
Ø1.525	+0.012/-0.001	1.524"	✓		✓	"
0.36	+/-0.030	0.37"	✓		✓	"
0.62	+/-0.030	0.627"	-		✓	"
0.96	+/-0.030	0.955"	-		✓	"
2.21	+/-0.030	2.213"	-		✓	"
4.12	+/-0.030	4.119"	✓		✓	"
8.95	+/-0.030	8.965"	-		✓	Prototype
1.925	+/-0.010	1.929"	✓		✓	mmor
8.61	+/-0.030	8.613"	-		✓	Prototype
2.62	+/-0.030	2.625"	-		✓	mmor
0.344	+/-0.010	0.347"	-		✓	mmor
0.688	+/-0.010	0.690"	-		✓	"
0.64	+/-0.030	0.638"	-		✓	"
2.66	+/-0.030	2.655"	-		✓	"
5.75	+/-0.030	5.751"	-		✓	"
6.41	+/-0.030	6.421"	-		✓	"
0.300	+/-0.010	0.297"	-		✓	"
0.923	+/-0.010	0.918"	-		✓	"
0.050	+/-0.010	0.048"	-		✓	

<b>Measured by:</b>	Jm	<b>Audited by:</b>	S	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	12-6-15	<b>Date:</b>	12/6/15	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	08.09.04	New Issue	KJ/DD	



**D3699-041 SUPPORT ASSEMBLY**



**D3699-042 SUPPORT ASSEMBLY**

**PART LIST**

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3699-041	SUPPORT ASSEMBLY
	X	D3699-042	SUPPORT ASSEMBLY
1		D3699-1	SUPPORT
	1	D3699-2	SUPPORT
1	1	MS21059L3	NUTPLATE
2	2	MS20426AD3-3	RIVET

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 84846 MLJ  
12/05/20

RELEASED  
08-07-01/11

**NOTES:**

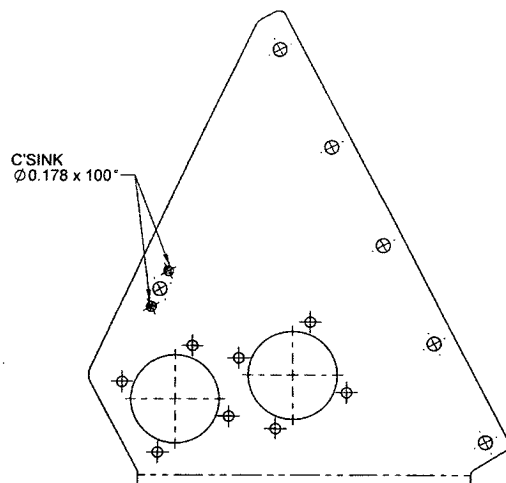
- 1) INSTALL MS21059L3 NUTPLATE USING C'SINK  $\phi 0.098$  HOLES ON D3699-1/-2
- 2) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3699-041/-042 & B/N USING FINE POINT PERMANENT INK MARKER
- 3) WEIGHT: 0.17 lb EACH

A	NEW ISSUE	RF	08.05.12
REV.	DESCRIPTION	BY	DATE
DESIGN	JE	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JE		
CHECKED	JP	DRAWING NO.	REV. A
MFG. APPR.	JP	D3699	SHEET 1 OF 2
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	SUPPORT ASSEMBLY	NTS
DATE	08.05.12	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

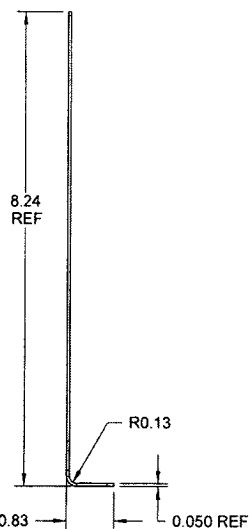


**D3699-1 LH SUPPORT**

**D3699-2 RH SUPPORT**



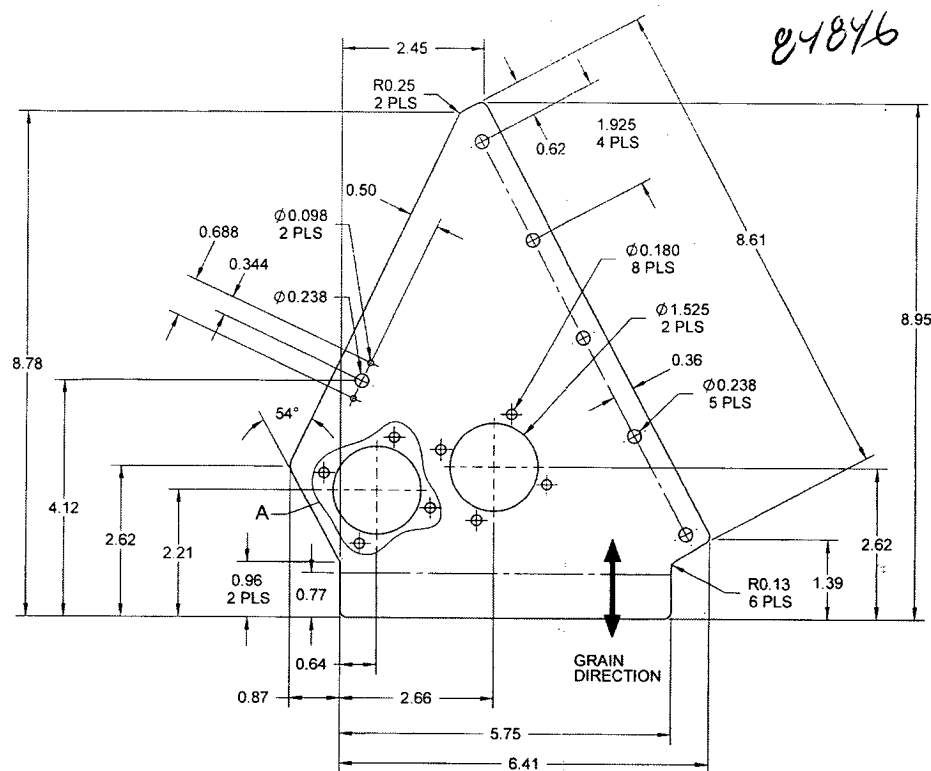
C-SINK  
Ø0.178 x 100°



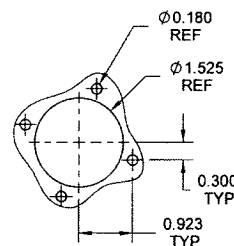
**D3699-1 SUPPORT, LH SHOWN  
(D3699-2 SUPPORT, RH OPPOSITE)  
(MAKE FROM D3699-1F FLAT PATTERN)**

**NOTES:**

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) OR 6061-T6 (QQ-A-250/11) SHEET 0.050 THICK  
(REF. DART SPEC. M2024T3S.050 OR M6061T6S.050)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.17 lbs



**D3699-1F FLAT PATTERN**



**DETAIL A**

**RELEASED**  
08-07-12

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D3699</b>	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		<b>SUPPORT ASSEMBLY</b>	NTS
DATE	08.05.12	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	